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CLAIMS

1. Polypeptide isolated or purified of Lactobacillus having at least a N-désoxyribosyltransférase activity of sequence of amino acids selected among sequences SEQ
ID N2, SEQ ID NR 4, SEQ ID NR 6, SEQ ID NR 8, SEQ ID NR 10,
SEQ ID NR 12.

2. Isolated polypeptide according to claim 1 characterized in that the polypeptide of SEQ ID N2 is coded by N-désoxyribosyltransférase coded by the gene ntd Lh de Lactobacillus helveticus.

3. Isolated polypeptide according to claim 1 characterized in that the polypeptide of SEQ ID NR 4 is coded by N-désoxyribosyltransférase coded by the gene ptd Lh de Lactobacillus helveticus.

4. Isolated polypeptide according to claim 1 characterized in that the polypeptide of SEQ ID NR 6 is coded by N-désoxyribosyltransférase coded by the gene ntd Lf de Lactobacillus fermentum.

5. Isolated polypeptide according to claim 1 characterized in that the polypeptide of SEQ ID NR 8 is coded by N-désoxyribosyltransférase coded by the gene ntd of Lactobacillus crispatus.

6. Isolated polypeptide according to claim 1 characterized in that the polypeptide of SEQ ID NR 10 is coded by N-désoxyribosyltransférase coded by the gene ntd of Lactobacillus amylovorus.

7. Isolated polypeptide according to claim 1 characterized in that the polypeptide of SEQ ID NR 12 is coded by N-désoxyribosyltransférase coded by the gene ntd of Lactobacillus acidophilus.

8. Isolated polypeptide characterized in that it includes/understands a polypeptide chosen among: a) a polypeptide of sequence SEQ ID N2, SEQ ID NR 4, SEQ ID NR 6, SEQ ID NR 8, SEQ ID NR 10, SEQ ID NR 12. b) a varying polypeptide polypeptide of sequences of amino acids defined in A); c) an homologous polypeptide with defined polypeptide in A) or b) and comprising at least 80% of identity with the aforementioned polypeptide of A); d) a fragment of at least 15 consecutive amino acids of a defined polypeptide in A); e) a biologically active fragment of a defined polypeptide in A), b) or c).

9. Polypeptide according to claims' 1 to 8 characterized in that it makes it possible to satisfy the guanine requirement of stock PAK6 deposited with the CNCM on May 2, 2001 under the NR 1-2664.

10. Purified or isolated Polynucléotide characterized in that it codes for a polypeptide according to claims' 1 to 9.

11. Polynucléotide according to claim 10 of sequence SEQ ID? 1, SEQ ID NR 3, SEQ ID NR 5, SEQ ID NR 7,
SEQ ID NR 9, SEQ ID NR 11, SEQ ID NR 13.

12. Isolated Polynucléotide characterized in that it includes/understands a selected polynucléotide among: a) SEQ ID NR 1, SEQ ID NR 3, SEQ ID NR 5, SEQ ID NR 7,
SEQ ID NR 9, SEQ ID NR 11, SEQ ID NR 13. b) the sequence of a fragment of at least 15 consecutive nucleotides of sequence SEQ ID NR 1, SEQ ID NR 3, SEQ ID NR 5, SEQ ID NR 7, SEQ ID NR 9, SEQ ID NR 11, SEQ
ID NR a 13 c) nucleic sequence presenting a percentage of identity from at least 70%, after optimal alignment with a defined sequence in A) or b); d) the sequence complementary or the sequence of corresponding ARN to a sequence such as defined in A), b) or c).

13. Polynucléotide according to claims' 10 to 12 characterized in that its expression in the stocks
PAK6 makes it possible to satisfy the guanine requirement of the aforesaid the stock.

14. Use of a polynucléotide according to claim 12 as a starter for the amplification or the polymerization of nucleic sequences of Ndésoxyribosyltransférases.

15. Use of a polynucléotide according to claims' 10 to 13 as a probe for the detection of nucleic sequences of Ndésoxyribosyltransférases.

16. Recombinant vector of cloning and/or expression including/understanding a polynucléotide according to one of claims 10 to 13 or expressing a polypeptide according to any of claims 1 to 9.

17. Called recombinant vector pLH2 including/understanding polynucléotide SEQ ID NR 1 such as present in the bacterial stock deposited with the CNCM on May 30, 2001 under the NR I2676.

18. Called recombinant vector pLH4 including/understanding polynucléotide SEQ ID NR 3 such as present in the bacterial stock deposited with the CNCM on May 30, 2001 under the NR I-2677.

19. Called recombinant vector pLF6 including/understanding polynucléotide SEQ ID NR 5 such as present in the bacterial stock deposited with the CNCM on May 30, 2001 under the NR I2678.

20. Called recombinant vector pLA including/understanding polynucléotide SEQ ID NR 20 such as present in the bacterial stock deposited with the CNCM on June 21, 2001 under the NR I-2689.

21. Cell host, characterized in that it is transformed by a vector according to claims' 16 to 20.

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22. Bacterium transformed by the vector pLH2 including/understanding polynucléotide SEQ ID NR 1 as deposited with the CNCM on May 30, 2001 under the NR I-2676.

23. Bacterium transformed by the vector pLH4 including/understanding polynucléotide SEQ ID NR 3 as deposited with the CNCM on May 30, 2001 under the NR I-2677.

24. Bacterium transformed by the vector pLF6 including/understanding polynucléotide SEQ ID NR 5 as deposited with the CNCM on May 30, 2001 under the NR I-2678.

25. Bacterium transformed by the vector pLA including/understanding polynucléotide SEQ ID NR 9 as deposited with the CNCM on June 21, 2001 under the NR I-2689.

26. Organism métazoaire animal or vegetal, except the man, characterized in that it includes/understands a cell according to claim 21.

27. Proceeded of preparation of a recombinant polypeptide characterized in that one cultivates a cell host according to claim 21 or one bacterium according to claims' 22 to 25 under conditions allowing the expression and optionally secretion of the aforesaid polypeptide recombinant and which one recovers the aforementioned recombinant polypeptide.

28. Recombinant polypeptide capable to be obtained by a process according to claim 27.

29. Monoclonal or polyclonal antibody and its fragments characterized in that it selectively binds a polypeptide according to one of claims 1 to 9 or 28.

30. Proceeded of enzymatic synthesis in vitro or in vivo of désoxyribonucléotides characterized in that it includes/understands at least a reactional step catalysed by N-désoxyribosyltransférase according to any of claims 1 to 9.

31. Process according to claim 30 characterized in that the aforementioned N-désoxyribosyltransférase catalyzing the exchange of a first present nucleobase in a désoxyribonucléoside by one second nucleobase.

32. Proceeded according to claim 31 characterized in that the aforementioned second nucleobase is selected in the group made up of bound purins by N9, of bound pyrimidins by N1, the bound azines by N1, of imidazols bound by N1, the aforementioned second nucleobases being able to carry substitutions of hydrogen to the nonbound positions.

33. Proceeded according to claim 32 characterized in that the aforementioned second nucleobase is selected in the group made up of the 6-methyl purin, 2-amino-6méthylmercaptopurine, 6-diméthylaminopurine, 5azacytidine, 2,6-dichloropurine, 6-chloroguanine, 6chloropurine, 6-aza-thymine, 5-fluoro-uracil, ethyl-4amino-5-imidazol carboxylate, imidazol-4-carboxamide and 1, 2,4-triazole-3-carboxamide.

34. Proceeded according to claim 31 characterized in that the aforementioned first nucleobase is selected in the group made up of adenine, guanine, the thymine, uracil and the hypoxanthine.

35. Process in vivo according to claims' 31 to 34 characterized in that it includes/understands moreover the step to introduce into the cell host the first present nucleobase in a désoxyribonucléoside.

36. Process in vivo according to claims' 31 to 34 characterized in that it includes/understands moreover the step to introduce into the cell host the second present nucleobase in a désoxyribonucléoside.

37. Process in vivo according to claims 31 to 34 characterized in that it includes/understands moreover the step to introduce into the cell host the first present nucleobase in a désoxyribonucléoside and the second nucleobase of manner simultaneous and/or shifted in time.